

App. No.: 10/743,856
Response filed on December 2, 2005

REMARKS/ARGUMENTS

This Response was promulgated by a telephone call from the Examiner to the undersigned on November 28, 2005 suggesting a claim amendment that would put the application in condition for allowance. Applicants very much appreciate the Examiner's proactive efforts to move this application to allowance and would like to take the Examiner up on his offer. However, there are several issues that Applicants believe need to be addressed.

Status of the Claims

Claims 7-17 and 61-66 were withdrawn from consideration as being drawn to a non-elected invention. Applicants traversed the Restriction Requirement of Claim 17 in the previously submitted Responses and have respectfully requested the Examiner to consider the reassignment of Claim 17 elected Group III for the reason stated in the Response filed on October 13, 2005. In a telephone call from the undersigned to the Examiner on December 2, 2005, Applicants respectfully requested the Examiner to rejoin Claim 17 to the claims under examination, and the Examiner concurred. Thus, Claim 17 stands as originally filed.

Claims 1-6, 43-60, and 67 were rejected in the most recent Office Action.

Claims 1 and 47 were amended by this response by replacing the 'about 40" with '48.8'.

Claims 7-16 and 61-66 are now canceled by Applicants to further place this application in condition for allowance.

Claims 1-6, 17, 43-60 and 67 are now currently pending and are under examination.

Summary of Examiner Interviews

Applicants appreciate the time the Examiner took to discuss the present application with the undersigned over the phone on November 28, 2005 and on December 2, 2005.

During the phone conversation on November 28, 2005, Claim 1 was discussed in view of the following reference: U.S. Patent No. 6,124,367 (hereinafter *Plecha et al.*). The Examiner proposed to narrow the range of cobalt content in the catalyst by increasing the lower limit of the cobalt content from about 40% to 48.8% to distinguish it from the teaching of *Plecha et al.*. The Examiner pointed out that some catalyst examples in the present application disclose 48.8% Co.

During the phone conversation on December 2, 2005 in which the undersigned called the Examiner, Applicants agreed with the Examiner's suggestion on the narrowing of the cobalt range

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and submit this amendment to further this application towards allowance. Other issues which were discussed during this phone call were the rejoinder of Claim 17 to the group of claims being examined; the cancellation of the withdrawn claims 1-16 and 61-66; the Applicants' desire to contest a point made by the Examiner in the Office Action dated June 14, 2005; and the Applicants' submission of a supplemental Information Disclosure statement. The Examiner agreed to the rejoinder of Claim 17 and the cancellation of withdrawn Claims 6-16 and 61-66. The undersigned agreed to supply the Examiner with this supplemental reply including this claim amendment in conjunction with a supplemental Information Disclosure statement.

Applicants believe that the present amendment which adopts the Examiner's suggestion distinguishes the present invention from the teaching of *Plecha et al* reference, and also from the combination of *Plecha et al* in view of U.S. Patent No. 6,130,184 (*Geerlings et al*), and further believe that Claim 1, as amended, is patentable over the art of record.

Supplemental Information Disclosure

Applicants file a Supplemental Information Disclosure Statement in conjunction with this amendment, and respectfully request that the attached documents be considered and officially cited in examination of this application by the Examiner.

Additional point of Argument

Applicants have reviewed the arguments put forth in the most recent Response and recognize that they may not have fully contested a point made by the Examiner. Specifically, the Examiner indicated on Page 4 of the Office Action mailed on June 14, 2005 that the average cobalt oxide crystallite size was an inherent characteristic of the catalyst disclosed by *Plecha et al*. The Examiner's conclusion is not supported by any evidence and is factually wrong. Applicants believe it appropriate to take this opportunity to clearly record their disagreement with the Examiner on this point.

Applicants submit that the undisclosed average crystallite size of cobalt in *Plecha et al* is not a *necessary* technological fact of the prior art. The average crystallite size is not entirely a function of the components of a catalyst but is also a result of several factors, such as the support's porous structure (when the catalyst is supported) and the method of catalyst preparation. As evidence, Applicants submit the following:

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- *Saib et al* in *Catalysis Today* (January 2002) Volume 71, Issues 3-4, Pages 395-402 which is listed and attached in the Supplemental Information Disclosure Statement filed in conjunction with this amendment. Referring particularly to Table 3 in *Saib et al* (on page 398), *Saib et al* teach that supported catalysts with same composition (i.e., 20 wt% Co content on silica) have different average crystallite sizes; for example, the average crystallite size as measured by H₂ chemisorption were from 5.9 to 10.6 nm for a support pore diameter from 4 to 15 nm respectively; and 19.8 nm for a support pore diameter of 2 nm.
- U.S. Patent No. 6,586,481 by *Pederzani et al* which is listed and attached in the Supplemental Information Disclosure Statement filed in conjunction with this amendment, which discloses cobalt oxide having crystals between 2 nm and 8 nm (from 20 to 80 Angstroms) for a cobalt catalyst supported on alumina (see at least Abstract of *Pederzani et al*).
- As for calcination conditions, Applicants already have shown such evidence in the present specification as filed. Applicants demonstrated that the cobalt average crystallite size increased as the calcination temperature increased for a given catalyst composition (see for example Figure 2 as filed by Applicants).

Because the average crystallite size of cobalt oxide is variable depending on at least the two factors mentioned above, it cannot be said to be an inherent characteristic of *Plecha's* catalyst.

As such, the limitation of an average crystallite size is a substantive distinction that cannot be casually dismissed as being an inherent property.

Conclusion

Applicants respectfully request the Examiner to consider this supplemental reply which adopts the Examiner's suggestion. No new matter is introduced by way of this amendment. Applicants respectfully request the rejoinder of Claim 17 to the claims under examination for the reasons described above. Applicants believe that this amendment places the application in condition for allowance. Allowance of all pending Claims 1-6, 17, 43-60 and 67 is respectfully solicited.

If a petition for extension of time is necessary in order for this paper to be deemed timely filed, please consider this a petition therefore. If any fee is due, please appropriately charge such fee to Deposit Account Number 16-1575 of ConocoPhillips Company, Houston, Texas.

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Should there be any remaining issue which the Examiner believes would possibly be resolved by a conversation, the Examiner is invited to call the undersigned at (281) 293-4751 so that further delay in a Notice of Allowance can be avoided.

Respectfully submitted,

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